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The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
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C-A OPERATIONS PROCEDURES MANUAL

12.57 TtB Ion Source (Light Ion) Startup

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Hand Processed Changes

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Approved: _____ ***Signature on File*** _____
Collider-Accelerator Department Chairman Date

C. Carlson

12.57 TtB Ion Source (Light Ion) Startup

1. Purpose

The purpose of this procedure is to define the sequence of activities required start a TVDG NII with deuterium (light ions).

2. Responsibilities

It is the responsibility of the person or persons executing this procedure to observe all safety rules.

3. Prerequisites

- 3.1 The Pulsed 860 or PSX-120 Source Wiring checklist to be completed, [C-A-OPM 12.21, "MP-6/7 TtB Timing Checklist"](#) to be completed.

4. Precautions

- 4.1 Source target to be identified by material and serial number.
- 4.2 All accelerator zones must be set when control room shielding door is closed.

5. Procedure

- 5.1 Lock Off the switcher magnet power supply to prevent beam from hitting target rooms 2, 3 and 4 beam plugs.
- 5.2 The TVDG Operations Supervisor, or TVDG Liaison Physicist, shall observe the installation of the appropriate target into the ion source.
 - 5.2.1 The TVDG Operation Supervisor or TVDG Liaison Physicist will then switch the appropriate accelerator to the Light Ion Mode.
 - 5.2.2 The date and time of the mode selection will be recorded by the TVDG Ops Supervisor, or TVDG Liaison Physicist, in the operations log book.
 - 5.2.3 The Mode selection key will then be removed and secured by the TVDG Ops Supervisor, or TVDG Liaison Physicist.
- 5.3 The TVDG Operations Supervisor, or TVDG Liaison Physicist, will verify the security system selection by attempting to open the beam stops of the selected accelerator with the room NOT secured, but the perimeter set.
 - 5.3.1 The test results to be recorded in the operations log book.

- 5.4 The TVDG Operations Supervisor, or TVDG Liaison Physicist, to request an RCT post the selected accelerator vessel entrance "Contamination Check Required". The posting to remain until the next tank entry contamination check is performed.
- 5.5 The ion source can now be started and light ion tuned through the accelerator and TtB following ALARA guidelines in [C-A-OPM 12.60 "TtB Operations with Light Ions \(m<Carbon\)](#).

6. **Documentation**

- 6.1 TVDG Operation Supervisor, and/or TVDG Liaison Physicist, to enter information in Operations Log Book as required by this procedure.

7. **References**

- 7.1 [C-A-OPM 12.60 "TtB Operations with Light Ions \(m<Carbon\)](#).

8. **Attachments**

None